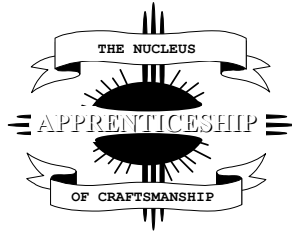




**STANDARDS OF APPRENTICESHIP**  
**adopted by**

**DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

<u>Skilled Occupational Objective(s):</u>	<u>(sponsor)</u>	<u>DOT</u>	<u>Term</u>
DIESEL-ELECTRIC SET SPECIALIST		952.381-010	8000 HOURS
LOCKSMITH		709.281-010	8000 HOURS
MAINTENANCE CARPENTERS		860.281-010	8000 HOURS
MAINTENANCE ELECTRICIAN/ELECTRONICS		829.281-014	8000 HOURS
MAINTENANCE PAINTERS		840.381-010	8000 HOURS
MAINTENANCE SIGN PAINTERS		970.381-026	8000 HOURS



**APPROVED BY**  
**Washington State Apprenticeship and Training Council**  
**REGISTERED WITH**  
**Apprenticeship Section of Specialty Compliance Services Division**  
Washington State Department Labor and Industries  
Post Office Box 44530  
Olympia, Washington 98504-4530

**APPROVAL:**

APRIL 21, 1989

Initial Approval

By: AL LINK

Chairman of Council

APRIL 20, 2001

Addendum Amended

By: PATRICK WOODS

Secretary of Council

APRIL 20, 2001

Committee Amended

## **DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

NOTE: THE FOLLOWING ADDENDUM SHALL BE SPECIFIED TO THE INDIVIDUAL JOINT APPRENTICESHIP AND TRAINING COMMITTEE AND ITS CRAFTS.

1. **GEOGRAPHICAL AREA COVERED:**

The area covered by these standards shall be the buildings and grounds serviced by the Washington State Department of General Administration, Division of Capitol Facilities Apprenticeship Committee.

2. **MINIMUM QUALIFICATION:**

Age:	A minimum of 18 years of age.
Education:	High school diploma or the equivalent
Physical:	Physically able to perform the work of the trade.
Testing	None
Other	Must have completed probationary status under Washington Civil Service Rules. Electrician applicants must have verifiable math skills equal to High School Algebra.

3. **CONDUCT of PROGRAM under WASHINGTON EQUAL EMPLOYMENT OPPORTUNITY PLAN:**

Exempt by reason of selection through Civil Service Rules WAC 296-04-480.

4. **TERM OF APPRENTICESHIP:**

The term of apprenticeship shall be 8000 hours of employment.

5. **PROBATIONARY PERIOD:**

As established under Washington State Merit System Rules.

6. **RATIO OF APPRENTICES TO JOURNEYMEN:**

When the employer employs one (1) full time journeyman for the trade they shall be entitled to employ one (1) apprentice for the trade. Thereafter, the employer may employ apprentices at a ratio of one (1) apprentice for each fully employed journeyman employed for that trade.

7. **WAGE PROGRESSION:**

Apprentices shall be paid on the following percentage basis in accordance with WAC 296-04-270(2)(C):

1st period	0 through 1040	79% of the journeyman rate
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**DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

2nd period      1041 through 3120      87% of the journeyman rate

3rd period      3121 through 8000      91% of the journeyman rate

NOTE:            In cases where apprentices are selected from other departments of state employment and are transferred to the apprenticeship program, they shall receive the appropriate rate of pay as established by the Washington State salary rules.

In no event shall the specified journeyman wage from which the apprentice's percentages are computed be less than eighty (80) percent of the established prevailing basic wage.

The wage for each trade objective shall be submitted for approval and shall remain in effect until amended.

## **DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

### 8. WORK PROCESSES:

The apprentice shall receive such instruction and experience in all branches of the trade as are necessary to develop a practical and skilled mechanic, versed in the theory and practice of the trade. The apprentice shall also perform such other duties in the shop and on-the-job as are commonly related to the trade.

The maintenance sign painter apprentice shall be given the opportunity through actual work experience to acquire the knowledge and skill necessary to be a journeyman. The following condensed schedule of work experience is to be used as a guide in the training of apprentices.

A.	<u>Maintenance Sign Painter:</u>	DOT 970.381-026	<u>Approximate Hours</u>
1.	Computerized sign maker .....		1800
	a. Terminology		
	b. Operation		
	c. Type styles/font installation		
	d. Plotter pressure/weight		
	e. Cutting/printing		
	f. Material use/identification		
2.	Computer/digitizer Plotting Board.....		400
	a. Terminology		
	b. Operation		
	c. Job specification record keeping		
	d. Printer Operation		
3.	Sign Fabrication .....		2800
	a. Terminology		
	b. Lay-out		
	c. Methods/aids		
	d. Application		
	e. Material use/identification		
4.	Sign installation .....		400
	a. Terminology		
	b. Materials		
	c. Equipment		
	d. Application		
5.	Job Estimation.....		300
	a. Terminology		
	b. Production costs		
	c. Labor/installation costs		

**DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

6.	Engraving .....	300
	a. Terminology	
	b. Operation	
	c. Layout	
	d. Application	
	e. Material use identification	
7.	Heat transfer.....	200
	a. Terminology	
	b. Operation	
	c. Application	
	d. Material use/identification	
8.	Paints.....	600
	a. Mixing, tinting and harmonizing colors	
	b. Terminology	
	c. Operation	
	d. Equipment	
	e. Types of materials	
9.	Brushing and rolling .....	600
	a. Techniques	
	b. Methods and care of equipment	
10.	Spraying.....	600
	a. Operation	
	b. Types of equipment	
	c. Methods of application	
	d. Cleaning	

TOTAL HOURS: 8000

ALL OF THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS  
UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED  
IN THESE STANDARDS.

**DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

B.     Maintenance Painter                             DOT 840.381-010                     Approximate Hours

The apprentice shall receive such instruction and experience in all branches of the trade as are necessary to develop a practical and skilled mechanic versed in the theory and practice of the trade. The apprentice shall also perform such other duties in the shop and on-the-job as are commonly related to the trade.

The maintenance painter apprentice shall be given the opportunity through actual work experience to acquire the knowledge and skill necessary to be a journeyman. The following condensed schedule of work experience is to be used as a guide in the training of apprentices.

1.	Preparation of surfaces (architectural .....	800
2.	Operation and care of tools and equipment .....	600
3.	Materials used in painting and decorating (architectural) .....	1000
4.	Application (architectural).....	1800
5.	Wallcovering preparation and application .....	400
6.	Color matching and mixing .....	200
7.	Texturing.....	400
8.	Special decorative .....	500
9.	Rigging.....	400
10.	Metal preparation (pressure blast, grinding, etc. ....	500
11.	Metal coatings and application .....	600
12.	Spray painting airless and conventional .....	<u>800</u>

TOTAL HOURS:   8000

ALL OF THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED IN THESE STANDARDS.

## **DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

C.     Maintenance Carpenter:                     DOT 860.281-010                     Approximate Hours

The apprentice shall receive such instruction and experience in all branches of the trade as are necessary to develop a practical and skilled mechanic versed in the theory and practice of the trade. The apprentice shall also perform such other duties in the shop and on-the-job as are commonly related to the trade.

The maintenance carpenter apprentice shall be given the opportunity through actual work experience to acquire the knowledge and skill necessary to be a journeyman. The following condensed schedule of work experience is to be used as a guide in the training of apprentices.

1.	Layout, lines and levels, joist spacing, etc.....	200
2.	Framing walls, joists and laminations, wall porches, etc.....	200
3.	Framing roofs, trusses, special roofs, etc.....	220
4.	Sub-flooring, storm sheathing, roof sheathing and decking .....	200
5.	Exterior trim, gutter, frame setting, cornice molding and sash framing.....	250
6.	Roofing, wood shingles, etc.....	50
7.	Interior finish, door hanging, etc. ....	460
8.	Floor laying and preparation.....	160
9.	Stair building, stair layout, etc.....	160
10.	Constructing wall and footing forms, piers and pilasters .....	240
11.	Exterior walls, shakes, cedar siding, asbestos siding, etc.....	200
12.	Cabinet building, cupboards, fixtures, shipwork .....	340
13.	Cabinet installation, etc.....	240
14.	Heavy construction piers, docks, bridges, shoring .....	200
15.	Erecting pre-fab houses or buildings; preparation for same .....	100
16.	Tile board, colortile, insulation board, plaster board.....	100
17.	Hardware installations, hardware assembly,	
18.	Power tool operation, power tool setup, etc.....	200
19.	Special concrete form construction, stair forms, columns and beams .....	200
20.	Preparation for other trades, plaster grounds, Backing and cutting .....	150
21.	Frame setting for masonry building.....	190
22.	General shop layout work .....	400
23.	Stock cutting and stock room work .....	300
24.	Sash and door machinery .....	300
25.	Shaper work including setup and some knife grinding.....	200
26.	Frame machining .....	300
27.	Frame assembly .....	300
28.	Glueroom operations.....	100
29.	Incidental machine work in connection with cabinet such as saw, jointer and router.....	500

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30.	Bench assembly of cabinets and similar items .....	500
31.	Machine and hand sanding .....	200
32.	Cabinet layout .....	300
33.	Estimating lumber quantities .....	200

**TOTAL HOURS: 8000**

ALL OF THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED IN THESE STANDARDS.



## **DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

D.     Locksmith:                                     DOT 709.281-010                                     Approximate Hours

The apprentice shall receive such instruction and experience in all branches of the trade as are necessary to develop a practical and skilled mechanic, versed in the theory and practice of the trade. The apprentice shall also perform such other duties in the shop and on-the-job as are commonly related to the trade.

The locksmith apprentice shall be given the opportunity through actual work experience to acquire the knowledge and skill necessary to be a journeyman. The following condensed schedule of work experience is to be used as a guide in the training of apprentices.

1.     Keys, Blank Identification .....390
  - a.     Terminology
  - b.     Identification by silhouette
  - c.     Identification by mailing
  - d.     Manufacturers' cross-reference
  - e.     Controlled keyway duplication
2.     Keys, Duplication- .....300
  - a.     Terminology
  - b.     Equipment
  - c.     Restrictions
  - d.     Equipment calibration
  - e.     Key labeling
3.     Cylinder Servicing .....610
  - a.     Terminology
  - b.     Construction
  - c.     Operation
  - d.     Servicing
4.     Locks, Cabinet, Furniture, Mailbox .....310
  - a.     Terminology
  - b.     Product Identification
  - c.     Opening Techniques
  - d.     Codes
  - e.     Servicing
5.     Codes and Code Equipment.....770
  - a.     Terminology
  - b.     Types of Codes
  - c.     Applications
  - d.     Factory Specifications
  - e.     Cutting methods

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f.	Use of a micrometer	
6.	Locksets, Functions .....	610
a.	Terminology	
b.	Product Identification	
c.	Application	
d.	Code Requirements	
e.	Liability factors	
7.	Locksets, Servicing .....	620
a.	Terminology	
b.	Construction	
c.	Operation	
d.	Product Identification	
e.	Servicing	
8.	Locksets, Installation .....	620
a.	Terminology	
b.	Wood doors	
c.	Hollow metal doors	
d.	Narrow style aluminum doors	
e.	Others	
9.	Lock, Professional Opening Technique .....	770
a.	Terminology	
b.	Methods	
c.	Applications	
10.	Keys, Impression .....	610
a.	Terminology	
b.	Methods	
c.	Aids	
11.	Masterkeying, Basic .....	770
a.	Terminology and symbols	
b.	Basic one and two step progression	
c.	Applications	
d.	Record keeping	
12.	Automotive, Domestic .....	690
a.	Terminology	
b.	Opening techniques	
c.	Cylinder servicing	
d.	Cylinder removal and replacement	
e.	Steering column servicing	

**DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

13.	Card System .....	310
	Class K	
14.	Carpentry .....	310
	a. Elementary building construction	
	b. Door and frame construction	
	c. Tools and their use	
15.	Shop Management	310
	a. Shop operations	
	b. Management theory	
	c. Employment practices	
	d. Contractors and contracting	
	e. Checks and collections	
	f. Sales and marketing	
	g. Consumer protection	
	TOTAL HOURS:	8000

ALL OF THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED IN THESE STANDARDS.

## **DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

E. Diesel-Electric Set Specialist: DOT 952.382-010 Approximate Hours.

The apprentice shall receive such instruction and experience in all branches of the trade as are necessary to develop a practical and skilled diesel-electric set specialist, versed in the theory and practice of the trade. The apprentice shall also perform such other duties in the shop and on-the-job as are commonly related to the trade.

The diesel-electric set specialist apprentice shall be given the opportunity through actual work experience to acquire the knowledge and skill necessary to be a journeyman. The following condensed schedule of work experience is to be used as a guide in the training of apprentices

### **Diesel Engine Systems:**

1. Engine Lubricating .....800
  - a. Check for leaks, engine oil level and hydraulic governor oil level
  - b. Change: engine oil, full-flow filter(s), by-pass filter, and hydraulic governor oil
  - c. Perform: engine oil analysis sample
2. Engine Cooling .....800
  - a. Check: for leaks for radiator air restriction operation of coolant heater, hoses and connections, coolant level. radiator zinc anode plugs, anti-freeze and DCA concentration, belt condition and tension, fan hub, drive pulley and water pump, motor operated louvers
  - b. Change: water filter(s) anti-freeze and DCA
  - c. Check/clean: coolant system
  - d. Perform: coolant system analysis sample
3. Engine Air intake .....800
  - a. Check: for leaks, air cleaner restriction, piping and connections
  - b. Clean: crank case breather or change air cleaner element(s)
4. Engine Fuel System .....800
  - a. Check: for leaks, fuel storage tank level, governor linkage, fuel lines and connections, fuel transfer pumps
  - b. Drain: sediment from day tanks
  - c. Change: fuel filter(s)
  - d. Adjust: valve and injector settings

**DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

- 5. Engine Exhaust .....800
  - a. Check: for leaks, for exhaust restriction, turbocharger end-play and radial clearance
  - b. Drain: Condensation trap
  - c. Tighten: exhaust manifold and turbocharger capscrews
- 6. Electrical (DCV) .....800
  - a. Check: battery-charging system
  - b. Test: engine safety controls and alarms
  - c. Clean: electrical and battery connections
- 7. Engine related .....800
  - a. Check: for unusual vibration
  - b. Tighten: mounting hardware
  - c. Clean: engine and generator area

**AC Volt System**

- 8. Switchgear .....800
  - Check: start switch in automatic instrumentation power distribution wiring, power circuit breaker, transfer switch
- 9. Main Generator .....800
  - a. Check: Air intake and outlet for restrictions, windings and connections
  - b. Measure and record; generator winding resistant
  - c. Grease: bearings
  - d. Clean: generator
- 10. Operational Procedures .....800
  - a. Perform: exercise engine, operational load test
  - b. Record: all maintenance and repairs in generator log book (s)
  - c. Order: engine and generator supplies and parts fuel deliveries.

**TOTAL HOURS: .....8000**

ALL OF THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED IN THESE STANDARDS.

## **DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

### **F.     Maintenance Electrician/electronics: DOT #829.281-014     Approximate Hours**

The apprentice shall receive such instruction and experience in all branches of the trade as are necessary to develop a practical and skilled mechanic versed in the theory and practice of the trade.

The maintenance electrician/electronics apprentice shall be given the opportunity through actual work experience to acquire the knowledge and skill necessary to be a journeyman. The following condensed schedule of work experience is to be used as a guide in the training of apprentices.

1.     Safe Practice/orientation .....250
  - a.     First Aid
  - b.     Confined Spaced
  - c.     Tag/lockout
  - d.     Safety/fire prevention familiarization
  - e.     Disposal systems/environmental concerns
  - f.     Shop practice/housekeeping
  - g.     Safe use of tools/equipment
  - h.     Terminology/definitions
2.     General Maintenance/Equipment .....2000
  - a.     Panel Control Boards and switching devices
  - b.     Switch boards and switching devices
  - c.     Small motors (Frac. H. P.) AC, DC
  - d.     Large Motors AC, DC
  - e.     Controllers
  - f.     Inplant communications
  - g.     Transformers-single and triple
  - h.     Miscellaneous Equipment
  - i.     Industrial Lighting
  - j.     Removal and installation of electrical equipment
3.     Testing/troubleshooting .....2000
  - a.     Test instruments/computers
  - b.     Motors
  - c.     Controls
  - d.     Batteries
  - e.     Generators
4.     Circuit Analysis-Schematic Diagrams .....700
  - a.     Electrical
  - b.     Hydraulic
  - c.     Air

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5.	Special Trade Assignment .....	1000
a.	Rigging-staging-ladders	
b.	Basic mechanics/brakes	
c.	General wiring	
d.	Conduit and wire pulling	
e.	Basic hand tools	
f.	Boom truck/forklift operation (limited to safe use practice within classification)	
6.	Electronics Training.....	1600
	Electronics training to include electronic math, basic D C circuits, test instruments usage and theory, discrete device theory, SCR drives, programmable controllers, encoders, power supplies, photo electronics permanent magnetic motors, serve and proportional valves/transducers.	
7.	Power Distribution .....	200
a.	Inside and outside, high and low voltage distribution systems, maintenance and replacement	
b.	Transformer connecting, testing and repairing	
c.	Switch gear and load centers, maintenance and repair	
8.	Welding (limited to safe use practice within ..... classification)	50
a.	Soldering, brazing, welding (acetylene)	
b.	Welding (electric)	
c.	Maintenance and repair of welding equipment	
9.	Instrumentation .....	200
a.	Testing meters	
b.	Usage	
c.	Minor Repair	
d.	Installation	
e.	Calibration	

**TOTAL HOURS: 8000**

ALL OF THE FOREGOING WORK EXPERIENCE AS HEREIN NOTED IS UNDERSTOOD TO MEAN AS IT PERTAINS TO THE TRADE HEREIN INVOLVED IN THESE STANDARDS.

## **DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

### 9. **RELATED/SUPPLEMENTAL INSTRUCTION:**

- A. Each apprentice shall enroll in and attend classes in subjects related to this trade as approved by the State Board for Community and Technical, for a minimum of 144 hours per year.
- B. The methods of related/supplemental training shall consist of one or more of the following:
  - (x) Supervised field trips
  - (x) Approved training seminars
  - (x) A combination of home study and approved correspondence courses
  - ( ) Technical college
  - (x) Community college
  - ( ) Training trust
  - ( ) Other (specify)
- C. Hours 144
- D. Satisfactory progress must be maintained in related training classes. (See Section 10, Administrative/Disciplinary Procedures).

### 10. **ADMINISTRATIVE/DISCIPLINARY PROCEDURES:**

- A. It shall be the responsibility of each apprentice to complete a work progress sheet (as supplied by the apprenticeship committee). Work progress sheets shall be turned in to the apprenticeship committee secretary once a month. All apprentices shall be worked in accordance with the work processes. Any exception shall be only with the prior approval of the apprenticeship committee.
- B. The second Tuesday of October and the second Tuesday of April there will be a meeting of the apprenticeship committee for the purpose of reviewing all apprentices' progress and the training they are getting. All apprentices must attend.
- C. A quorum shall consist of a minimum of two management and two employee members of the committee. If a quorum is not present the meeting shall be canceled.

### 11. **COMPOSITION OF COMMITTEE AND ALTERNATES:**



## **DIVISION OF CAPITOL FACILITIES APPRENTICESHIP COMMITTEE**

The Apprenticeship Committee shall be composed of three (3) members representing management and three (3) members representing the employees. The employee members shall be appointed by AFSCME Local Union No. 443.

### **The Employer Representatives Shall Be:**

Mike Leonard, Chairman  
Department of General Administration  
Division of Capitol Buildings and Grounds  
OB-2, Mail Stop PA-11  
Olympia, Washington 98504

Julie Deruwe (Alternate)  
Department of General Administration  
Division of Capitol Buildings and Grounds  
OB-2, Mail Stop PA-11  
Olympia, Washington 98504

James Burnson  
Department of General Administration  
Division of Capitol Buildings and Grounds  
OB-2, Mail Stop PA-11  
Olympia, Washington 98504

Julie Sanchez  
Department of General Administration  
Division of Capitol Buildings and Grounds  
OB-2, Mail Stop PA-11  
Olympia, Washington 98504

### **The Employee Representatives Shall Be:**

Paul Gullekson, Secretary  
Department of General Administration  
Division of Capitol Buildings and Grounds  
OB-2, Mail Stop PA-11  
Olympia, Washington 98504

Dave Bebick (Alternate)  
Department of General Administration  
Division of Capitol Buildings and Grounds  
OB-2, Mail Stop PA-11  
Olympia, Washington 98504

Steward Tucker  
Department of General Administration  
Division of Capitol Buildings and Grounds  
OB-2, Mail Stop PA-11  
Olympia, Washington 98504

Gene Mossberger  
Department of General Administration  
Division of Capitol Buildings and Grounds  
OB-2, Mail Stop PA-11  
Olympia, Washington 98504

12. **SUBCOMMITTEE:** None
13. **TRAINING DIRECTOR/COORDINATOR:** None